

CLEAN COPY OF CLAIMS

1.(Amended) An industrial large scale process for the selective preparation of acetic acid from a gaseous feed comprising ethane, ethylene or mixtures thereof plus oxygen at elevated temperature, which comprises bringing in a reactor the gaseous feed into contact with a catalyst comprising the elements Mo, Pd, X and Y in gram atom ratios a:b:c:d in combination with oxygen



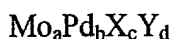
where the symbols X and Y have the meanings:

X is one or more elements selected from the group consisting of Cr, Mn, Nb, Ta, Ti, V, Te and W;

Y is one or more elements selected from the group consisting of B, Al, Ga, In, Pt, Zn, Cd, Bi, Ce, Co, Rh, Ir, Cu, Ag, Au, Fe, Ru, Os, K, Rb, Cs, Mg, Ca, Sr, Ba, Zr, Hf, Ni, P, Pb, Sb, Si, Sn, Tl and U;

the indices a, b, c and d are the gram atom ratios of the corresponding elements, where  $a=1$ ;  $b>0$ ;  $c>0$ ; and  $d=0-2$ .

11.(Amended) A catalyst for the selective oxidation of ethane, ethylene or mixtures thereof plus oxygen, comprising the elements Mo, Pd, X and Y in gram atom ratios a:b:c:d in combination with oxygen



where the symbols X and Y have the meanings:

X is one or more elements selected from the group consisting of Cr, Mn, Nb, Ta, Ti, V, Te and W;

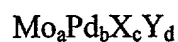
Y is one or more elements selected from the group consisting of B, Al, Ga, In, Pt, Zn, Cd, Bi, Ce, Co, Rh, Ir, Cu, Ag, Au, Fe, Ru, Os, K, Rb, Cs, Mg, Ca, Sr, Ba, Zr, Hf, Ni, P, Pb, Sb, Si, Sn, Tl and U;

the indices a, b, c and d are the gram atom ratios of the corresponding elements, where  $a=1$ ;  $b>0$ ;  $c>0$ ; and  $d=0-2$ .

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claim 1 has been amended as follows:

1.(Amended) An industrial large scale process for the selective preparation of acetic acid from a gaseous feed comprising ethane, ethylene or mixtures thereof plus oxygen at elevated temperature, which comprises bringing in a reactor the gaseous feed into contact with a catalyst comprising the elements Mo, Pd, X and Y in gram atom ratios a:b:c:d in combination with oxygen



where the symbols X and Y have the meanings:

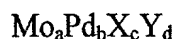
X is one or more elements selected from the group consisting of Cr, Mn, Nb, Ta, Ti, V, Te and W;

Y is one or more elements selected from the group consisting of B, Al, Ga, In, Pt, Zn, Cd, Bi, Ce, Co, Rh, Ir, Cu, Ag, Au, Fe, Ru, Os, K, Rb, Cs, Mg, Ca, Sr, Ba, Zr, Hf, Ni, P, Pb, Sb, Si, Sn, Tl and U;

the indices a, b, c and d are the gram atom ratios of the corresponding elements, where  $a=1$ ;  $b>0$ ;  $c>0$ ; and  $[d=0.05-2]$   $d=0-2$ .

Claim 11 has been amended as follows:

11.(Amended) A catalyst for the selective oxidation of ethane, ethylene or mixtures thereof plus oxygen comprising the elements Mo, Pd, X and Y in gram atom ratios a:b:c:d in combination with oxygen



where the symbols X and Y have the meanings:

X is one or more elements selected from the group consisting of Cr, Mn, Nb, Ta, Ti, V, Te and W;

Y is one or more elements selected from the group consisting of B, Al, Ga, In, Pt, Zn, Cd, Bi, Ce, Co, Rh, Ir, Cu, Ag, Au, Fe, Ru, Os, K, Rb, Cs, Mg, Ca, Sr, Ba, Zr, Hf, Ni, P, Pb, Sb, Si, Sn, Tl and U;

the indices a, b, c and d are the gram atom ratios of the corresponding elements, where  $a=1$ ;  $b>0$ ;

$c>0$ ; and  $[d=0.05-2]$   $d=0-2$ .